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DHV TESTREPORT EN926-2:2014

PHI VIOLA 20

Type designation PHI VIOLA 20
Type test reference no DHV GS-01-2390-18
Holder of certification [Papesh GmbH](#)
Manufacturer [Papesh GmbH](#)
Classification B
Winch towing Yes
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No



BEHAVIOUR AT MIN WEIGHT IN FLIGHT (65KG)

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (120KG)

Test pilots



Beni Stocker

No release



Reiner Brunn

The manufacturer has agreed to publish the videos of this test flight.

<u>Inflation/take-off</u>	A	A
Rising behaviour Smooth, easy and constant rising		Smooth, easy and constant rising
Special take off technique required No		No
<u>Landing</u>	A	A
Special landing technique required No		No
<u>Speeds in straight flight</u>	A	A
Trim speed more than 30 km/h Yes		Yes
Speed range using the controls larger than 10 km/h Yes		Yes
Minimum speed Less than 25 km/h		Less than 25 km/h
<u>Control movement</u>	A	A
Symmetric control pressure Increasing		Increasing
Symmetric control travel Greater than 55 cm		Greater than 65 cm
<u>Pitch stability exiting accelerated flight</u>	A	A
Dive forward angle on exit Dive forward less than 30°		Dive forward less than 30°
Collapse occurs No		No
<u>Pitch stability operating controls during accelerated flight</u>	A	A
Collapse occurs No		No
<u>Roll stability and damping</u>	A	A
Oscillations Reducing		Reducing
<u>Stability in gentle spirals</u>	A	A
Tendency to return to straight flight Spontaneous exit		Spontaneous exit
<u>en : Verhalten beim Verlassen einer vollständigen Steilspirale</u>	A	A
en : Erstes Ansprechen des Gleitschirms (die ersten 180°) en : unmittelbare Verringerung der Drehgeschwindigkeit		en : unmittelbare Verringerung der Drehgeschwindigkeit
Tendency to return to straight flight en : selbstständiges Ausleiten (G-Kraft abnehmend, Drehgeschwindigkeit		en : selbstständiges Ausleiten (G-Kraft abnehmend, Drehgeschwindigkeit

	abnehmend)	abnehmend)
Turn angle to recover normal flight	Less than 720°, spontaneous recovery	Less than 720°, spontaneous recovery

Symmetric front collapse	A	A
Entry	Rocking back less than 45°	Rocking back less than 45°
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Keeping course	Keeping course
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

en : Symmetrischer Frontklapper mindestens 50% Flügeltiefe	A	A
Entry	Rocking back less than 45°	Rocking back less than 45°
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Entering a turn of less than 90°	Keeping course
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

en : Symmetrischer Frontklapper im beschleunigten Flug mindestens 50% Flügeltiefe	A	A
Entry	Rocking back less than 45°	Rocking back less than 45°
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Entering a turn of less than 90°	Keeping course
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

Exiting deep stall (parachutal stall)	A	A
Deep stall achieved	Yes	Yes
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Change of course	Changing course less than 45°	Changing course less than 45°
Cascade occurs	No	No

High angle of attack recovery	A	A
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Cascade occurs	No	No

Recovery from a developed full stall	A	A
Dive forward angle on exit	Dive forward 0° to 30°	Dive forward 0° to 30°
Collapse	No collapse	No collapse
Cascade occurs (other than collapses)	No	No
Rocking back	Less than 45°	Less than 45°
Line tension	Most lines tight	Most lines tight

en : Kleiner einseitiger Klapper	A	A
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 0° to 15°	Dive or roll angle 0° to 15°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs	No	No
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

en : Großer einseitiger Klapper	A	A
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs	No	No
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

en : Kleiner einseitiger Klapper im beschleunigten Flug	A	B
Change of course until re-inflation	Less than 90°	90° to 180°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs	No	No
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

en : Großer einseitiger Klapper im beschleunigten Flug	A	A
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beschleunigten Flug

Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)	en : Nein (oder nur eine kleine Anzahl von eingeklappten Zellen mit selbstständiger Wiederöffnung)
Twist occurs	No	No
Cascade occurs	No	No
en : Faltleinen wurden benutzt	no	no

Directional control with a maintained asymmetric collapse

A

A

Able to keep course	Yes	Yes
180° turn away from the collapsed side possible in 10 s	Yes	Yes
Amount of control range between turn and stall or spin	More than 50 % of the symmetric control travel	More than 50 % of the symmetric control travel

Trim speed spin tendency

A

A

Spin occurs No No

Low speed spin tendency

A

A

Spin occurs No No

Recovery from a developed spin

A

A

Spin rotation angle after release Stops spinning in less than 90° Stops spinning in less than 90°

Cascade occurs No No

B-line stall

A

A

Change of course before release Changing course less than 45° Changing course less than 45°

Behaviour before release Remains stable with straight span Remains stable with straight span

Recovery Spontaneous in less than 3 s Spontaneous in less than 3 s

Dive forward angle on exit Dive forward 0° to 30° Dive forward 0° to 30°

Cascade occurs No No

Big ears

A

A

Entry procedure Dedicated controls Dedicated controls

Behaviour during big ears Stable flight Stable flight

Recovery Spontaneous in less than 3 s Spontaneous in less than 3 s

Dive forward angle on exit Dive forward 0° to 30° Dive forward 0° to 30°

Big ears in accelerated flight

A

A

Entry procedure Dedicated controls Dedicated controls

Behaviour during big ears Stable flight Stable flight

Recovery Spontaneous in less than 3 s Spontaneous in less than 3 s

Dive forward angle on exit Dive forward 0° to 30° Dive forward 0° to 30°

Behaviour immediately after releasing the accelerator while maintaining big ears Stable flight Stable flight

Alternative means of directional control

A

A

180° turn achievable in 20 s Yes Yes

Stall or spin occurs No No

Any other flight procedure and/or configuration described in the user's manual

No other flight procedure or configuration described in the user's manual